

Fuel Price Forecasts

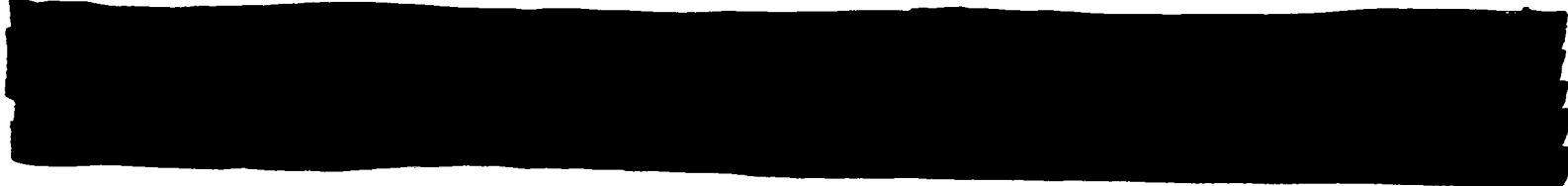
( \$/mmBtu )

070007-EI

2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

Crystal River Coal

- 6 lb blend
- 5 lb blend
- 4 lb blend
- 3 lb blend
- 1.2 lb blend



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Anclote

- 1.7 lb oil
- 1.1 lb oil
- Natural gas



6  
7  
8

CMP \_\_\_\_\_

COM \_\_\_\_\_

CTR \_\_\_\_\_

ECR 1

GCL \_\_\_\_\_

OPC \_\_\_\_\_

RCA \_\_\_\_\_

SCR \_\_\_\_\_

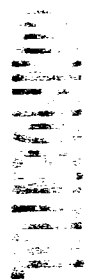
SGA \_\_\_\_\_

SEC \_\_\_\_\_

OTH \_\_\_\_\_

PEF POD2 - 00001

**REDACTED**

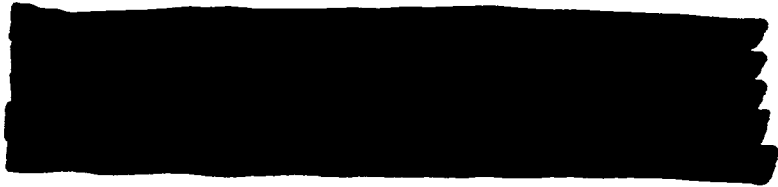


DOCUMENT NUMBER-DATE

10041 NOV-5 08

FPSC-COMMISSION CLERK

2020      2021      2022      2023      2024      2025



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PEF-POD2 - 00002

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PEF POD2 - 00003

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	
<b>BASELINE</b> Price (\$/mmBtu) Crystal River 1-2 Crystal River 4-5 Anclote	[REDACTED]																				1 2 3
<b>PLAN A</b> Price (\$/mmBtu) Crystal River 1 Crystal River 2 Crystal River 4 Crystal River 5 Anclote	[REDACTED]																				4 5 6 8
<b>PLAN B</b> Price (\$/mmBtu) Crystal River 1 Crystal River 2 Crystal River 4 Crystal River 5 Anclote	[REDACTED]																				9 10 11 12 13
<b>PLAN C</b> Price (\$/mmBtu) Crystal River 1 Crystal River 2 Crystal River 4 Crystal River 5 Anclote	[REDACTED]																				14 15 16 17 18
<b>PLAN D</b> Price (\$/mmBtu) Crystal River 1 Crystal River 2 Crystal River 4 Crystal River 5 Anclote	[REDACTED]																				19 20 21 22 23
<b>PLAN E</b> Price (\$/mmBtu) Crystal River 1 Crystal River 2 Crystal River 4 Crystal River 5 Anclote	[REDACTED]																				24 25 26 27 28
<b>PLAN F</b> Price (\$/mmBtu) Crystal River 1 Crystal River 2 Crystal River 4 Crystal River 5 Anclote	[REDACTED]																				29 30 31 32 33

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
<b>BASELINE</b> Price (\$/mmBtu) Crystal River 1-2 Crystal River 4-5 Anclote	[REDACTED]												
<b>PLAN A</b> Price (\$/mmBtu) Crystal River 1 Crystal River 2 Crystal River 4 Crystal River 5 Anclote	[REDACTED]												
<b>PLAN B</b> Price (\$/mmBtu) Crystal River 1 Crystal River 2 Crystal River 4 Crystal River 5 Anclote	[REDACTED]												
<b>PLAN C</b> Price (\$/mmBtu) Crystal River 1 Crystal River 2 Crystal River 4 Crystal River 5 Anclote	[REDACTED]												
<b>PLAN D</b> Price (\$/mmBtu) Crystal River 1 Crystal River 2 Crystal River 4 Crystal River 5 Anclote	[REDACTED]												
<b>PLAN E</b> Price (\$/mmBtu) Crystal River 1 Crystal River 2 Crystal River 4 Crystal River 5 Anclote	[REDACTED]												
<b>PLAN F</b> Price (\$/mmBtu) Crystal River 1 Crystal River 2 Crystal River 4 Crystal River 5 Anclote	[REDACTED]												

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PEF POD2 - 00004

PEF POD2 - 00005

PE - Crystal River SCR & WFGD  
bid evaluation spreadsheet

REDACTED IN ITS ENTIRETY

**Crystal River FGD & SCR Project**  
**Progress Energy Bid Review**  
October 3, 2007

In an effort to understand and evaluate Zachry's estimate for the Crystal River FGD & SCR project, Progress Energy conducted a thorough review of the estimate, using both inside and outside resources. An independent engineering firm, Bibb & Associates, was used to create an independent estimate for the project and assisted with a comparison / reconciliation of the estimate with Zachry's estimate. Progress Energy also used its in-house estimating staff to assist in the estimate evaluation and helped resolve discrepancies and overruns. The following document will outline this effort and further define the associated cost reductions resulting from this process.

Estimate Summary:

The following table break's down Zachry's estimate at various stages of the project.

Estimate Breakdown	March-07	12-Jul-07	24-Aug-07	6-Sep-07	28-Sep-07
Total Direct	[REDACTED]				
Total Indirect					
Project Total					

1  
2  
3

Attached is a more detailed breakdown the estimate revisions along with brief descriptions of the change. (Attachment A)

\*Please note that we have yet to receive a final estimate breakdown for the 28-Sep-07 proposal so the breakdown for this section is a approximation.

Quantity Review:

As stated above, Progress Energy contracted Bibb & Associates, a Kansas City based engineering company, to create an independent estimate for the Crystal River Project FGD & SCR project. At the completion of Bibb's independent estimate, an estimate comparison was conducted in an effort to understand and reconcile the quantity differences between the two estimates. Several areas were found in which the delta between the two estimates was significant and needed to be reviewed. Progress Energy requested Zachry to review these areas of discrepancy. Following Zachry's review, they decreased the quantities in those areas including excavation and backfill. At the end of this effort, the majority of Bibb's quantities were in line with the quantities that Zachry had included in their revised estimate, with the exception of electrical. An additional meeting was held in an effort to understand the differences between the two estimates. At the conclusion of the meeting it was determined that the majority of the difference between the two estimates were accounted for because Bibb made some estimating assumptions that proved to be incorrect based on the latest specifications.

Unit Rate Comparison:

Progress Energy reviewed Zachry's unit rates by comparing them to Bibb's unit rates, as well as had PE's estimating department compare the rates to the rates that are currently

being achieved in the industry on similar projects. In summation, the unit rates that Zachry used were in line with what is currently being achieved in the industry.

Attached is a list showing some of the unit rates for the major areas: (Attachment B)

Material Pricing:

Progress Energy used the check estimate completed by Bibb, along with other information collected from other on-going projects to check the material pricing used in Zachry's estimate. In general, the material pricing was reasonable. Additional questions were raised in the areas of; concrete, piers, insulation/lagging, buildings, urea system and material handling. Following this review, Zachry reduced several of the areas in question.

Attachment A and C contains an overall summary of the changes.

Construction Equipment:

Progress Energy reviewed the Equipment Plan provided by Zachry. Their plan included all the major pieces of construction equipment and the estimated durations of use. In reviewing the equipment plan and overlaying it on the schedule, the overall equipment plan was in line with expectations. An overall equipment \$/Direct MH comparison was also calculated and compared with the industry rates seen for similar type projects. A rate of [REDACTED] was calculated using Zachry's estimate, which is in line with similar projects. 1

Construction Management:

Progress Energy reviewed the Construction Management Plan provided by Zachry and compared it to the CM plan used on current, ongoing projects. In summary, the staffing plan Zachry proposes to use on the project was consistent with what would be expected on this type of project. Also, when comparing the ratio of Direct Craft MH's / CM MH's to what is typical in the industry, the ratio is [REDACTED] which is in line with what is seen in the industry. (Please note that this calculation includes the Field Engineering and Startup man-hours that are in the Burns & MacDonald estimate.) 2

Contingency & Escalation:

Another area of focus was on the contingency and escalation included in Zachry's estimate. After reviewing the estimate we believed that the levels of contingency and escalation used in the estimate were somewhat higher than the industry norm. Progress Energy requested additional information regarding how Zachry came up with the levels of Contingency and Escalation used in the estimate. Discussions were held and in the end, Zachry agreed to lower the amounts used. The following are the current percentages of contingency and escalation:

- Contingency: [REDACTED]
  - Escalation: [REDACTED]
- 3
- 
- 4

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Taxes:

Many discussions were held regarding taxation of the Crystal River project. In the end, all parties agreed that only the non permanent plant materials and equipment would be taxed. This resulted in a net reduction in the estimate of [REDACTED] from the previous estimate.

1

Overhead & Profit

Zachry's OH&P are as follows:

- G&A: [REDACTED]
- Fee: [REDACTED]

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3

When comparing these rates against today's market conditions these rates are reasonable and in line with what we would expect to see.

Other Attachments

- Estimate Question Log and Responses: (Attachment C)
- Negotiation Log (Attachment D)
- Pier Quantity R&O (Attachment E)
- Independent Level 1.5 Schedule and FTE Curve (Attachment F) An independent schedule was created to verify Zachry's risk of making the proposed schedule and verifying the Craft Staffing Plan.



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# Attachment A

Crystal River FGD & SCR Project  
Attachment A

Estimate Description		Aug-06	March-07	12-Jul-07	24-Aug-07	6-Sep-07	28-Sep-07
Code	Description	Total \$'s	Total \$'s	Total \$'s	Total \$'s	Total \$'s	Total \$'s
1	UNIT 4 DEMOLITION						
2	UNIT 4 LOW NOX BURNERS						
3	UNIT 4 SCR GAS PATH						
4	UNIT 4 SCR						
5	UNIT 4 AIR HEATER						
6	UNIT 4 PRECIPITATOR MODIFICATIONS						
7	UNIT 4 ID FANS						
8	UNIT 4 FGD GAS PATH						
9	UNIT 4 FGD / ABSORBER ISLAND						
10	UNIT 5 DEMOLITION						
11	UNIT 5 LOW NOX BURNERS						
12	UNIT 5 SCR GAS PATH						
13	UNIT 5 SCR						
14	UNIT 5 AIR HEATER						
15	UNIT 5 PRECIPITATOR MODIFICATIONS						
16	UNIT 5 ID FANS						
17	UNIT 5 FGD GAS PATH						
18	UNIT 5 FGD / ABSORBER ISLAND						
19	COMMON DIBASIC ACID						
20	COMMON OXIDATION AIR						
21	COMMON CHIMNEY						
22	NEW ACCESS RD (65+75 TO LIME STKPL)						
23	COMMON SITE PREPARATION						
24	COMMON SITE IMPROVEMENTS						
25	LAYDOWN & PARKING						
26	COM SITE (CONC.) IMPROVEMENTS						
27	GYP SUM MATERIAL HANDLING						
28	COMMON GYP SUM DEWATERING						
29	COMMON LIMESTONE HANDLING						
30	COMMON LIMESTONE PREPARATION						
31	COMMON PIPE RACK						
32	COMMON UREA / AMMONIA						
33	COMMON SEAWATER INTAKE AND MAKEUP						
34	COMMON WELL WATER AND MAKEUP						
35	COMMON WASTEWATER TREATMENT						
36	COMMON UTILITIES						
37	COMMON UNALLCOATED CRAFT						
38	COMMON MATERIAL HANDLING						
39	SCR FOUNDATION PIPING REROUTE						
40	OFFSITE LABOR						
41	COMMON PROCESSES AND EQUIPMENT						
42	59 COMMON CRAFT START UP ASSISTANCE						
43	Construction Equipment Owned & 3rd Party						
44	Small Tools						
45	Direct Labor Unallocated Supplies						
46	Scaffolding Supplies						
47	Craft Per Diem						
48	>50 Work Hour Premium Cost						
	total direct						
51	AAN - Pre Construction Costs						
52	SAFETY AND SECURITY TRAINNG						
53	BBN - Mobilization & Demobilization Cost						
54	CCN - Construction Staff & Expenses						
55	FFN - Construction Equipment Adders						
56	GGN - Support Labor & Indirect Supplies						
57	HHN - Indirect Sundries						
58	IIN - Home Office Support						
59	JJN - Engineering Liason & Expenses						
61	JV 1000 Engineering						
62	JV 5000 Commsioning & Warranty						
63	JV 6000 Joint Venture Indirects						
64	JV 7000 Escalation						
65	JV 7000 Contingency						
66	General & Administrative						
67	JV9000 Fee						
	total indirect						
	total proposal						

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# Attachment B

### Crystal River FGD & SCR Project- Unit Rate Analysis Attachment B

Description	UM	Qty	Zachry MH	Unit Rate
<b>Div 0- Civil / Site work</b>				
Pier	EA	[REDACTED]		1
Structural Excavation / Backfill	CY	[REDACTED]		2
Duct Demo	TNS	[REDACTED]		3
Pipe Demo	LF	[REDACTED]		4
Insulation Demo	SF	[REDACTED]		5
<b>Div 1- Concrete</b>				
Concrete	CY	[REDACTED]		6
<b>Div 2- Buildings / Structural Steel</b>				
Steel	TNS	[REDACTED]		7
<b>Div 3- Piping</b>				
Pipe	LF	[REDACTED]		8
<b>Div 4- Mechanical Equipment</b>				
Duct	TNS	[REDACTED]		9
ID Fans	EA	[REDACTED]		10
SCR	EA	[REDACTED]		11
Absorber	TNS	[REDACTED]		12
Air Heater	EA	[REDACTED]		13
<b>Div 5- Electrical</b>				
600V Control Cable	LF	[REDACTED]		14
600V Power Cable	LF	[REDACTED]		15
Abv 600V Power Cable	LF	[REDACTED]		16
Instrument Cable	LF	[REDACTED]		17
Cable Bus	LF	[REDACTED]		18
600V Control Terminations	EA	[REDACTED]		19
600V Power Terminations	EA	[REDACTED]		20
Abv 600V Terminations	EA	[REDACTED]		21
Instrument Terminations	EA	[REDACTED]		22
Cable Tray	LF	[REDACTED]		23
Conduit	LF	[REDACTED]		24
Grounding	LF	[REDACTED]		25
Heat Trace	LF	[REDACTED]		26
<b>Div 6- Instrumentation / Controls</b>				
<b>Div 7- Insulation / Painting</b>				
Paint	SF	[REDACTED]		27
Insulation	SF	[REDACTED]		28